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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,321	06/29/2001	Preston J. Hunt	42390P11147	8383

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BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
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Los Angeles, CA 90025-1026

EXAMINER

POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
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2134

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07/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/896,321	Applicant(s) HUNT ET AL.	
	Examiner PETER POLTORAK	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/17/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,10,12,20 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,7,10,12,20,29-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment received on 4/17/08 has been entered.

Response to Amendment

2. In light of applicant's remarks and amendments the objections to claims 1-2, 7, 10, 12, 20 and 29-32 are withdrawn.

Response to Arguments

3. Applicant's arguments have been fully considered but they were not found persuasive.
4. *Applicant repeats the arguments presented in the previous Office Action that "comparing of the two fingerprints as disclosed in Margolus (para. 006) is not the same as having 'the client message digests uniquely identify contents of the client files via unique fingerprints corresponding to the client files, wherein the unique fingerprints are generated based on the contents of the client files by performing a cryptographic hash of the contents of the client files' as recited by claim 1." However, applicant does not offer any support for applicant's assertion and does not address the examiner's response to this previously presented argument.*
Thus, the examiner refers applicant to paragraph 4, in the previous Office Action.
5. *Applicant argues that "A unique fingerprint that is based on the contents of each client file and used to identifies the contents of each client file (claim 1) is not the same as 'a fingerprint [that] serves as a unique name for the file data' as disclosed by Margolus (para. 006; emphasis added)".*

The examiner points out that not only paragraph 6 and 7 of Margolus discloses that that the fingerprint disclosed by Margolus is based on a file and inherently identifies the content of the file but the inherent properties of hash (and digital signatures) includes the argued limitations, e.g. unique identification of the data used to derive the “fingerprint”.

6. *On pages 9-11 applicant presents arguments regarding claims 1, 10 and 20.*

However, the examiner is not sure what exactly applicant argues. Specifically, on pg. 9 applicant appears to offer applicant's summary of Huang, Margolus, Chan and Bolosky's references, followed by the selective language of claim 1, pg. 10 and recites KSR ruling on pg. 10-11 and completes the arguments with the assertion that “Huang, Margolus, Chan, and Bolosky, neither individual nor when combined in any combination, teach or reasonably suggest all the features of claim 1 and a prima facie case of obviousness has not been met under MPEP § 2142”.

However, the newly amended language, with exception of emphasizing that synchronization is between two parties a client and a server (the repository), does not change the scope of the invention. As a result it is not clear how applicant claim language overcomes the art of record: applicant does not offer any concrete rationale to support the allegation, does not acknowledge the examiner's rejection and the corresponding art (e.g. paragraphs 14-17) and, consequently, does not discuss any rationale for which the presented rejection would not be valid. Thus, applicant arguments are found non-persuasive and the examiner refers applicant to previous (or current) Office Action, addressing the argued claim limitations.

7. Claims 1-2, 7, 10, 12, 20 and 29-32 have been examined.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Claim Rejections - 35 USC 103

8. Claims 1-2, 10, 12, 20, 29 and 31 remain rejected under 35 U.S.C. 103(a) as obvious over Huang (U.S. Patent No. 6571245) in view of Margolus (U.S. Pub. No. 20040143743), and further in view of Chan (U.S. Patent No. 6748538) or alternatively in further view of Bolosky (U.S. Pub. No. 20020194484).

As per claims 1, 10, 12 and 20, Huang (U.S. Patent No. 6571245) discloses a network synchronization of a client/repository files (Fig. 8 and col. 11 line 62-col. 12 line 9).

Huang does not disclose generating client message digests at a client, the client message digests corresponding to client files stored on at the client, wherein each client message digest corresponds to each client file on the client, wherein the client message digest uniquely identify contents of the client files via unique fingerprints corresponding to the client files, wherein the unique fingerprints are generated based on the contents of the client files by performing a cryptographic hash of the contents of the client files, wherein the client files are cataloged by the client message digests and generating repository message digests corresponding to

repository files, each repository message digest corresponding to a repository file on a repository, wherein the repository is coupled to the client over a network.

Margolus discloses generating client message digests (MD4) at a client, the client message digests corresponding to client files stored on at the client, wherein each client message digest corresponds to each client file on the client, wherein the client message digest uniquely identify contents of the client files via unique fingerprints corresponding to the client files, wherein the unique fingerprints are generated based on the contents of the client files by performing a cryptographic hash of the contents of the client files, wherein the client files are cataloged by the client message digests, generating repository message digests corresponding to repository files, each repository message digest corresponding to a repository file on a repository, wherein the repository is coupled to the client over a network and matching duplicate files using corresponding message digests (Margolus [6-7]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include generating, prior to synchronization, client message digests at a client, the client message digests corresponding to client files stored on at the client, wherein each client message digest corresponds to each client file on the client, wherein the client message digest uniquely identify contents of the client files via unique fingerprints corresponding to the client files, wherein the unique fingerprints are generated based on the contents of the client files by performing a cryptographic hash of the contents of the client files, wherein the client files are cataloged by the client message digests, generating repository message digests corresponding to

repository files, each repository message digest corresponding to a repository file on a repository, wherein the repository is coupled to the client over a network and matching duplicate files using corresponding message digests as disclosed by Margolus in order to determine whether to synchronize a client and a repository. One of ordinary skill in the art would have been motivated to perform such a modification in order to avoid unnecessary transmission and duplicate-storage of files.

Since introducing Margolus' invention would alleviate only the problem of transfer duplicate client/repository files, synchronizing the client files and the repository files, if the client files contents and the repository file contents do not match would be necessary in order to successfully accomplish client/repository file synchronization taught by Huang.

9. Huang and Margolus do not explicitly disclose performing a post-synchronization match of the client message digests with the repository message digests and if the client message digests, detecting one or more client files corresponding to one or more unmatched client message digests, and re-synchronizing the client files and the repository files, the re-synchronization including copying the one or more client files to the repository such that the client message digests and the repository message digest are matched.

However, the examiner points out that the limitation is implicit. It is clear that process of matching and synchronization client/repository files does not end after a single implementation because the content of user's computers constantly changes,

and any additional, subsequent synchronization, which inherently would involve matching, would read on a post-synchronization and re-synchronization.

Furthermore, computer operations can frequently be affected by various problems, e.g. network connection failure, computer bugs, multiple connections preventing access to a particular file (or a digest), etc. and as a result a double check and a repeat of a of computer tasks is well known in the art of computer science. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform a post-synchronization match of the client message digest with the repository message digests and if the client message digests do not match the repository message digests. One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure the successful completion of the synchronization task.

10. Huang and Margolus do not explicitly disclose tagging the one or more client files but the limitation is at least implicit. Tagging is simply an concept directed to identification of a particular object for the purpose of a particular task to be performed on (or in some situations by) the object, and in order for the files to be synchronized they should be identified as files to be synchronized, especially since computer tasks, such as synchronizing, back up, etc., are not completed instantaneously (see Boothby et al. (US Patent No. 7209911) for example). Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to tag the one or more client files. One of ordinary skill in the art

would have been motivated to perform such a modification in order to indicate the files for subsequent synchronization.

11. As per the limitation: "wherein the synchronizing of the client files and the repository files includes marking those un-matched files of the client files and the repository files to be copied to the repository to be synchronized at a later time" Margolus et al. teaches that a data item may be represented as a composite of objects, and the component objects may be separately deposited in the repository [110-111].

It is clear that in order to ensure that all the pieces of a composite object are copied into the repository (even though they are separately deposited) must be marked to reflecting the fact that they are part of the composite object and that they are to be copied.

Also, in situations where multiple files are compared it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to configure the client system to mark the content on the client that was found not to match the repository content in order to prevent the match test repetition.

Also, in [28] it is taught that a plurality of clients are connected to a network store data in the repository. In multi node network environment it is likely that a client attempts to initiate data transfer to the repository and that the repository can not accept the requests (e.g. bandwidth limit, client licenses, no available ports, equipment malfunction, etc.)

Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to mark an object that is selected for copying to the repository.

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One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure that the data that could not be accepted by the repository at the time of the request could be copied as soon as the repository was ready to accept it.

Furthermore, it is old and well-known practice to mark content (e.g. files) for future actions that is performed on the content (see U.S. Patent No. 6434621, or Windows 2000 (Task Scheduler) for example). One of ordinary skill in the art at the time of applicant's invention would have been motivated to marking content for future actions that is performed on the content (e.g. later copying to the repository) in order to provide flexibility when the action is performed (see KSR ruling).

12. As per claims 2, 29 and 31 the ordinary artisan would recognize that new files are frequently created on client (and a repository) and, as a result, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to add client file contents that are missing on the repository to the repository given the benefit of including new files in synchronization process.

13. Claims 7, 30 and 32 remain rejected under 35 U.S.C. 103(a) as obvious over Huang (U.S. Patent No. 6571245) in view of Margolus (U.S. Pub. No. 20040143743), and further in view of Chan (U.S. Patent No. 6748538) or alternatively in further view of Bolosky (U.S. Pub. No. 20020194484).

Huang in view of Margolus disclose synchronizing files using message digests, as discussed above.

14. Huang in view of Margolus do not disclose combining the message digests into a single message digest.

Chan teaches combining the message digests into a single client message digest (Chan, col. 3 line 45- col. 4 line 7).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine message digests into a single message given the benefit of ensuring the integrity of the message digests.

15. Similarly, Bolosky discloses combining the message digests into a single client message digests (manifest, Bolosky, [7]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine message digests into a single message given the benefit of a increased efficiency of evaluating multiple digests.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter Poltorak/

Examiner, Art Unit 2134

/Kambiz Zand/

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